

# **Scholastic Bowl**

Round 1 — Set 1

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The following are notes for moderators. Please note that these are general rules and may be overridden by questions when indicated.

#### On reading

- Where appropriate, pronunciation guides have been provided.
- The moderator is to read each question exactly as written, emphasizing italicized words.
- When a player buzzes in, the moderator is to immediately stop reading.
- The moderator must use a consistent and reasonably slow reading pace. The moderator must also speak intelligibly and loud enough that all players can hear the question in its entirety. Players may stop the moderator at any time to request that the moderator speak louder or more clearly.

#### On answers

- The moderator is to accept only the answer indicated beneath a question.
- The bolded part of each answer is required to receive points. Other parts are optional.
- Brackets beside answers provide the moderator notes and additional information to assist with scoring (which may override the rules provided on this page).
- Unless the answer is a proper noun, the moderator must accept both singular and plural variants of an answer.
- “prompt”: The moderator will say *prompt* or indicate in some other way that additional information is required. The moderator may prompt multiple times on the same question as long as each subsequent answer provides more information than the last and each answer is correct.
- “this/these word(s) only”: The answer (or its required parts) must be said in isolation without any modifiers to receive points.
- “equivalent/descriptive answers”: The moderator must evaluate whether the response is equivalent in meaning to the indicated answer and award points accordingly.
- “also accept”: The moderator must also accept the indicated secondary answer(s).

#### On powerplays

- All toss-up questions contain the symbol (\*) which indicates the *powerplay* cutoff.
- When a toss-up is answered before the powerplay cutoff, the team which answered receives 15 (instead of 10) points for that toss-up.
- In the event that a player buzzes in before the powerplay cutoff, but the moderator stops reading too late, the powerplay bonus is awarded based on when the player buzzes in, not when the moderator stops reading.

Questions begin on the next page.

### 1. HISTORY

As the first absolutist monarch of England, *this* king ruled by divine right, challenging papal supremacy. After being refused a divorce, *this* king founded the Anglican Church (\*). The Broadway musical SIX reimagines *this* king's wives as modern-day pop singers. A jingle to help students remember the fate of *this* king's six wives goes: "*Divorced, beheaded, died; divorced, beheaded, survived.*" For 10 points, name *this* second Tudor monarch.

ANSWER: Henry VIII [prompt on *Henry* or *Henry Tudor*]

### 1. SCIENCE

A bowling ball is attached to one end of a string, and the other end is attached to the ceiling, forming a pendulum. The bowling ball is then pulled back to a height of five meters above the resting position. Air resistance is negligible. The ball is released from rest. For 10 points each,

A Although the ball swings quickly through its path, it will never rise to a height greater than five meters because *this* is always conserved in a closed system.

ANSWER: energy [this word only; do **not** accept or prompt on *kinetic energy* or *potential energy*]

B Just before it is released, the ball has only *this* form of energy.

ANSWER: gravitational potential energy

C The ball moves fastest at the bottom of its path because *this* type of energy is maximized there.

ANSWER: kinetic energy

### 2. LANGUAGE ARTS

*These* statements can be either analytical, explanatory, or argumentative. *These* statements are considered weak if they are imprecise, are not debatable, or are too broad. Dr. Gary Thomas referred to *these* statements as "your argument in a nutshell (\*)." For 10 points, name *these* statements which are usually placed at the end of the introduction to an essay.

ANSWER: thesis

### 2. MATH

Name the following commonly used programming keywords by their definitions or uses. For 10 points each,

A *This* keyword is usually placed at the end of a function. Although there may be multiple of *these* keywords in a function, only one such statement can be executed in a single call.

ANSWER: return [prompt on *yield* until "one" is read]

B If a function does not return anything, *this* keyword is put in its header.

ANSWER: void

C In statically typed programming languages, *this* keyword is put just before a variable's name to indicate that the variable is either true or false.

ANSWER: boolean

### 3. LITERATURE

*This* Greek demigod is the son of Zeus and Alcmene [Alk·mee·nee]. When Hera sent serpents to kill *this* demigod in his cradle, he strangled them both. In a manic state induced by Hera, *this* demigod killed his wife and children (\*). As punishment for his murders, *this* demigod was forced to serve a king for twelve years. For 10 points, name *this* demigod who slayed the Hydra as one of his twelve labors.

ANSWER: Hercules [also accept Heracles]

### 3. SCIENCE

Every quantity you can think of can be expressed in terms of SI units. Name the following quantities by their definition in SI units. For example, if I said *meters per second*, you would answer *speed* or *velocity*—both are acceptable. For 10 points each,

A *This* quantity is measured in inverse seconds.

ANSWER: frequency [do **not** accept or prompt on *hertz*]

B *This* quantity is measured in ampere-seconds.

ANSWER: charge [do **not** accept or prompt on *coulomb*]

C *This* quantity is measured in kilogram-meters per second squared.

ANSWER: force [do **not** accept or prompt on *newton*]

### 4. SOCIAL SCIENCE

Prophets and messengers of *this* religion include Adam, Noah, Abraham, Moses, and Jesus. Shia and Sunni [Soo·nee] (\*) are the two major denominations of *this* religion. Adherents of *this* religion undergo a *hajj* to Mecca as one of *this* religions five pillars. For 10 points, name *this* second-largest religion whose holy text is the Quran.

ANSWER: Islam

### 4. MISCELLANEOUS

When you go shopping, you may feel like you have a large selection of items to choose from. However, many household brands are actually consolidated under one *umbrella* company. Name each of the following umbrella companies by the brands they own. For 10 points each,

A *This* umbrella company owns Tic-Tac, Nutella, and Butterfinger.

ANSWER: Ferrero Group

B *This* umbrella company owns Frito Lay, Lipton, and Gatorade.

ANSWER: PepsiCo

C *This* umbrella company owns National Geographic, ESPN, and Marvel.

ANSWER: Walt Disney

### 5. SCIENCE

Real-world examples of *these* objects have a nonzero mass, so their rotational inertia is their mass multiplied by the square of their radius. When *these* objects have zero mass, as in the theoretical Atwood machine, they are (\*) considered *ideal*. For 10 points, name *this* machine that derives its mechanical advantage by reversing the direction of input force with a rope suspended over a wheel.

ANSWER: pulley

### 5. SOCIAL SCIENCE

Zeno of Elea was famous for posing *this* type of thought experiment. For 10 points each,

A Name *these* statements in which two pieces of seemingly sound logic lead to a contradiction.

ANSWER: paradox

B Many paradoxes can be resolved by applying *this* principle which states that the simplest explanation is most often correct.

ANSWER: Occam's razor

C Despite being used to resolve most paradoxes, Occam's razor is said to be "dulled" by *this* philosopher's *beard*. Name this Ancient Greek philosopher who taught Aristotle and was taught by Socrates.

ANSWER: Plato

### 6. MISCELLANEOUS

Metheglin [meh·thuh·gluhn] and melomel are two varieties of this beverage. In Norse mythology, *this* beverage is said to be crafted from the blood of Kvasir [Kwa·sear] and to turn those who drink it

into a poet or scholar. For 10 points, name *this* alcoholic beverage similar to wine but fermented with honey.

ANSWER: mead

6. **HISTORY**

Name these prominent historical figures who went blind. For 10 points each,

A *This* American soul musician composed *Georgia on My Mind*, *Hit the Road Jack*, and *You Don't Know Me*.

ANSWER: Ray Charles.

B The most prestigious award for journalism is named after *this* New York newspaper publisher.

ANSWER: Joseph Pulitzer

C *This* impressionist is known best for his numerous paintings of water lilies.

ANSWER: Claude Monet

7. **HISTORY**

In 1920, ten billion of *these* invasive animals devastated crops in Australia. Control methods for *these* animals include shooting, poisoning, fumigating, and dismembering. In 1807, Napoleon was famously attacked by *these* animals and forced to flee (\*). For 10 points, name *these* animals whose feet are thought to be lucky.

ANSWER: rabbit [also accept bunny or hare]

7. **SCIENCE**

Name these structures used in bridges. For 10 points each,

A *This* structure is an assembly of beams, connected by *nodes* that creates a bridge's rigid structure.

ANSWER: truss

B *These* structures, which serve a similar function to pillars, extend from water to the underside of the bridge.

ANSWER: pier

C *These* structures, which are named after aquatic animals, are used to protect bridges from colliding with a ship.

ANSWER: dolphin

8. **MATH**

*This* object is formally defined as the *image* of an interval to a topological space by a continuous function. *This* object can be *fractal* like the one named after Bill Gosper or *space-filling* like the one named after David Hilbert. *This* object can be embedded in any number of dimensions, but its manifold dimension is always one, unlike a surface (\*). For 10 points, name *this* mathematical object that is similar to a line but which does not have to be straight.

ANSWER: curve

8. **HISTORY**

Rome wasn't built in a day. In fact, modern historians aren't sure *how* exactly Rome was founded—even ancient Romans weren't sure. For 10 points each,

A One popular legend points to two brothers who jointly founded Rome. Name either.

ANSWER: Remus [also accept Romulus]

B After being left to die on the bank of a river, the legends claim that both brothers were found and raised by *this* animal.

ANSWER: she-wolf

C After discovering their royal heritage, both brothers agree to found a city of their own, but they cannot agree on which hill to build the city upon. After a long dispute, Romulus does *this* to Remus and becomes the first king of Rome.

ANSWER: murder [also accept equivalent answers]

9. **MISCELLANEOUS**

*This* quantity is a measure of the ethanol concentration of a beverage. A degree symbol is commonly used to abbreviate *this* quantity. In the US, *this* quantity ranges from zero for a non-alcoholic beverage to two hundred for pure ethanol (\*). For 10 points, name *this* quantity that is exactly double a drink's ABV.

ANSWER: proof

9. **LANGUAGE ARTS**

Consider the following sentence: *The man was six feet tall, but a dog jumped over him all the same.* For 10 points each,

A The word "the" takes *this* part of speech in the sentence. "The" is the *definite* form of *this* part of speech, unlike the word "a".

ANSWER: article [also accept adjective or adverb]

B The word "him" takes *this* part of speech in the sentence.

ANSWER: pronoun

C When a pronoun refers to a noun, the noun is called *this*. In the sentence, the word "man" serves as *this* type of noun.

ANSWER: antecedent

10. **SCIENCE**

*This* organelle used to be a free-living prokaryote and is thought to have become part of eukaryotic cells by endosymbiosis. *This* organelle has a double membrane and uses aerobic respiration to generate ATP for its cell. The Krebs cycle takes place in the matrix of *this* organelle (\*). For 10 points, name *this* organelle which is commonly referred to as "the powerhouse of the cell."

ANSWER: mitochondrion

10. **SOCIAL SCIENCE**

World War One was caused by a plethora of factors. For 10 points each,

A The acronym MAIN is used to help students remember the four main causes of World War One. The letters stand for militarism, alliances, imperialism, and *this* fourth cause which is defined as pride for one's own country.

ANSWER: nationalism

B The four previous causes are broad and long-term. The immediate cause of World War One was Gavrilo Princip's assassination of *this* Archduke.

ANSWER: Archduke Franz Ferdinand

C *This* German Chancellor used *realpolitik* to weave the elaborate alliance system that held Europe together before World War One. When *he* was fired by William II, the alliance system crumbled, which was a major cause of World War One.

ANSWER: Otto von Bismarck

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END OF QUESTION SET

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